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10/593,573	01/17/2007	Peter Hesse	10-378-WO-US	1340

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EXAMINER	
THEISEN, MARY LYNN F	

ART UNIT	PAPER NUMBER
1743	

MAIL DATE	DELIVERY MODE
05/31/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/593,573	HESSE ET AL.	
	Examiner	Art Unit	
	MARY LYNN F. THEISEN	1743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 May 2011*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *38-94* is/are pending in the application.

4a) Of the above claim(s) *38-71 and 80-94* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *72-79* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/23/2010*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Claims 38-71 and 80-94 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 9/7/2010.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 76-79 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In claim 76, the language “wherein a medium length L50 of the fibers maximally corresponds to the value of the medium grain size d50 of the spherical powder particles” is not supported by the specification as originally filed. The specification at page 7, lines 22-26, indicate that L50 is either 20-150 µm or 10-100 µm depending on the matrix material. For melt spraying or prilling, the specification at page 9, line 28 through page 10, line 6, indicates that d50 is either 20-150 µm or 10-100 µm depending on the matrix material. There is no indication that they maximally correspond or what is meant by maximally corresponds means. Does

maximally corresponds mean that the fiber length can be on longer than the powder grain size or does it means that the fiber length is the same length as the powder grain size?

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 76-79 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. It is not clear what is meant by “maximally corresponds”. Does maximally corresponds mean that the fiber length can be on longer than the powder grain size or does it means that the fiber length is the same length as the powder grain sizer?

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 76- 79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Otaigbe et al (6,533,563) in view of Hirao et al (5,171,489).

4. Otaigbe et al disclose a process of forming particles by melting polymeric material, gas atomizing the material to form droplets, and cooling the droplets. See column 1, lines 50-54; column 2, lines 10-24; and column 2, lines 35-46. The particles are separated by size (fraction spectrum). See column 4, lines 33-37. The atomization process is controlled to form particles that are spheres, fibers or whiskers. Hirao et al (abstract) disclose forming fibers by forming a mixture of molten polymer (matrix) and reinforcing fibers and blowing the mixture with hot gas. It would have been obvious to one of ordinary skill in the art to add reinforcing fibers as Hirao et al do to the matrix (polymer) of Otaigbe et al because the reinforcing fibers add strength and the material either with or without the reinforcing fibers are processed in a similar manner (melting and blowing with gas).

5. Claims 72-75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Otaigbe et al in view of Hirao as applied to claims 76-79 above, and further in view of EP 1170318.

6. Using aromatic polyether ketone as the matrix material in the melt processing of Otaigbe et al would have been obvious to one of ordinary skill in the art as this material is melt processible as evidenced by EP 1170318 (abstract).

7. Claim 75 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schoenherr et al in view of Otaigbe et al.

8. Both references are described above. It would have been obvious to one of ordinary skill in the art to separate the particles of Schoenherr et al into fraction spectrum because this is typically done in the art of making particles as evidenced by Otaigbe et al.

9. Claims 73, 76, 77 and 79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schoenherr et al in view of Hirao et al.

10. Both references are described above. It would have been obvious to one of ordinary skill in the art to add reinforcing fibers as Hirao et al do to the matrix (polymer) of Schoenherr et al because the reinforcing fibers add strength and the material either with or without the reinforcing fibers are processed in a similar manner (melting and blowing with gas).

Response to Amendment

11. Applicant's arguments filed May 3, 2011 have been fully considered but they are not persuasive.

12. Applicants point out that the claims have been amended to include “for the use in the production of three-dimensional structures or molded bodies by means of layered manufacturing methods” in the preamble of claims 72 and 76. This statement is one of intended use and has not been given patentable weight as it does not affect the process of manufacturing the powder.

13. Applicants contend that neither Schenherr nor Otaigbe disclose or suggest the claim feature that the medium grain size is from 20 to 150 µm. However, the average particle size of the powder made by the references do overlap with claimed range and therefore meet the limitation. See Shoenherr column2, lines 1-16, particles are 0.5-100µm, preferably 2-70 µm and Otaigbe, column 2, lines 50-53, particles are 5-200 µm.

14. Applicants assert that the references do not teach or suggest the length of the fibers maximally correspond to the medium grain size of the powder. As indicated above this limitation is not supported by the specification and is unclear. It is noted that the reinforcing fibers of Hirao et al (column 3, line 46) can be 3-500 µm in length which encompasses applicants size range for L50.

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARY LYNN F. THEISEN whose telephone number is (571)272-1210. The examiner can normally be reached on Thursday and Friday 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joe Del Sole can be reached on 571-272-1130. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MARY LYNN F THEISEN/
Primary Examiner, Art Unit 1743